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AMSAT NEWS SERVICE
ANS-067

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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ANS-067 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 067.01
  From AMSAT HQ Kensington, MD.
March 8, 2015
To All RADIO AMATEURS
BID: $ANS-067.01

AMSAT-NA and M2 Antenna Systems Announce Member-Only Special Pricing

M2 Antenna Systems, Inc. of Fresno, CA introduced the new satellite antenna LEO-
Pack using their 436CP16 and 2MCP8A yagis during the 2015 HamCation in Orlando,
FL.

The 436CP16 and 2MCP8A are light weight, circularly polarized antennas optimized
for Low Earth Orbit (LEO) Satellite communications or other applications where a
small circular polarized antenna is required. Optimum match and gain designed
for the satellite band.

Rear mounted for easy coaxial cable routing. A preamp (not included) can be mounted close to the antenna for almost no coax loss before the preamp, maximizing your receive performance.

Computer design techniques help keep spurious side lobes down for optimum signal
to noise rations. Both the 436CP16 and 2MCP8A feature the same CNC machined, O-
ring and silicone-gel sealed, driven element assemblies common to all M2 Yagi
Antennas. This insures years of trouble free performance regardless of weather.

M2 designed a custom LEO cross boom to pair these two antennas together for a
very manageable amateur satellite ground station.

AMSAT-NA and M2 Antenna Systems are pleased to announce that the LEO-Pack system
is being offered to members only at $499, shipping included (US only). Non-members can join AMSAT-NA at time of purchase to participate in this special purchase. The M2 list price is $545.99.

To place your order, visit the AMSAT store at:
http://store.amsat.org/catalog/

M2 Antenna System's LEO-Pack page can be found at:
http://tinyurl.com/nyhgmcr

[ANS thanks the AMSAT Store and Robert Brown, KR7O, Amateur Marketing and Sales
Manager at M2 Antenna Systems for the above information]

Fox-1A Delivery and P-POD Integration Set For March 25

Following the successful conclusion of vibration and thermal/vacuum testing Fox-1 now is stored in a clean environment waiting for launch. AMSAT Vice-President Engineering, Jerry Buxton, N0JY says several required reports are being reviewed by the launch provider. Fox-1 completed its Mission Readiness Review (MRR) at Cal Poly in San Luis Obispo CA on February 24 before a review
board of Cal Poly and NASA representatives.

Jerry sums it all up, "Fox-1A delivery/P-POD integration is now set, for March
25, 2015 at Cal Poly in San Luis Obispo. From there, we won’t see her again –
but certainly look forward to hearing from her again!"

Ongoing updates will be posted on the AMSAT web page, on the AMSAT-NA Facebook
page, and in the AMSAT Journal.

[ANS thanks AMSAT Vice-President Engineering, Jerry Buxton, N0JY for the above
information]

AMSAT and University of Iowa Partner on Scientific Payload for Fox-1D

AMSAT and the University of Iowa have agreed to include the University's HERCI (High Energy Radiation CubeSat Instrument) radiation mapping experiment on Fox-1D. According to Don Kirchner, KDØL, Research Engineer at the University of Iowa, "HERCI is intended to provide a mapping of radiation in a low earth orbit. This is of scientific interest for planning CubeSat test flights for low energy X-Ray detectors."

"The instrument consists of a digital processing unit (DPU) derived from processors currently in orbit around Saturn on Cassini and on the way to Jupiter
on the Juno spacecraft," says Kirchner. "The DPU was shrunk to a CubeSat form
factor with funding from the Iowa Space Grant Consortium."

The University of Iowa's history in spaceflight research dates back to the earliest satellites. As Kirchner puts it, "HERCI can be considered a direct descendent of the first University of Iowa spaceflight instrument flown on Explorer I in 1958. The instrument is being constructed as a Senior Design Project by four Electrical Engineering students from the UI College of Engineering, under supervision of Space Physics engineering staff from the Department of Physics and Astronomy."

AMSAT's VP of Engineering, Jerry Buxton, NØJY, noted the win-win benefits of the agreement, stating, "This partnership with the University of Iowa illustrates our strategy of leveraging the new CubeSat design to assist universities that need a way to fly scientific payloads while providing a viable ongoing platform for amateur radio."

[ANS thanks Jerry, N0JY, for the above information]

I0/W5PFG/P Active on Satellites from Italy

Clayton, W5PFG, will be active as I0/W5PFG/P from Italy between March 7-12th.
He will operate the satellites from Rome (WW Loc. JN61et). He states, "Due to my
work schedule, I will only be available to work satellite passes in the late evening or early morning hours. If you would like to schedule a contact, please
send an E-mail to w5pfg at arrl.net.

[ANS thanks Ohio/Penn DX Bulletin No. 1205 for the above information]

ISS Deploys Cubesats

Lambda-Sat was launched to the International Space Station (ISS) from the Wallops Flight Facility in Virginia on July 13, 2014, in an Orbital Sciences'
Antares rocket CRS-2/ORB-2. Deployment from the ISS took place on March 4, 2015
along with the MicroMAS CubeSat. This followed the deployment of two other CubeSats GEARRSAT and TechEdSat-4.

The Lambda team encourages amateur radio operators around the world to listen

for and report the Lambda-Sat signal.

Frequency: 437.462 MHz
Downlink: AX.25 Unnumbered Information (UI) packets at 1200 bps AFSK
Transmission Power : 1W
Call Sign KK6DFZ

The Secretary of the Cyprus Amateur Radio Society (CARS) Nestor 5B4AHZ has written an article on Lambda-Sat, he says:

The naming of the Lambda-sat satellite came from the Greek letter L, lambda, a
reminder of Hellas, Helios, the Greek word Thalassa for sea, the Greek word Lithos which directly translates to stone (meaning “Land of Light”).

The Lambda-sat was constructed entirely of Greek volunteers who worked feverishly, selflessly and without any personal gain. Members of Lambda-sat contributed to the construction of the satellite system each with their knowledge in robotics, electronics, software development and telecommunications.
The group consists of young people from Greece who traveled to Silicon Valley in
California to participate in this project.

“I want to motivate the youth in Greece to continue to dream,” says the original
initiator of the project, Periklis Papadopoulos, Professor of Aerospace Engineering of the Federal University of California San Jose, which has been awarded from NASA for his contribution with the prize Turning Goals Into Reality
(TGIR). As the professor states, “My goal is to demonstrate the capabilities of
young people in Greece.” The professor believes that our country could be active
in this area and this is not an economic issue, but a question of will alone.

Reception reports of Lambda-Sat came be submitted to:
http://lambdasat.com/?page_id=181

Additional Lambda-Sat links:
Lambda-Sat http://lambdasat.com/

Facebook https://www.facebook.com/lambdateam

Article on Lambda-Sat by Nestor 5B4AHZ
http://www.cyhams.org/index.php/en/news-and-events/359-the-first-greek-microsatellite-is-a-fact

[ANS thanks AMSAT-UK for the above information]

Upcoming ARISS Contact 07 March 2015

An International Space Station school contact has been planned with participants
at G. Salvemini - G. La Pira, Montemurlo, Italy, and "Dante Alighieri" 1st Grade
Secondary (Middle) School, Casale Monferrato, Italy on 07 Mar. The event is scheduled to begin at approximately 10:51 UTC. The duration of the

contact is
approximately 9 minutes and 30 seconds. The contact will be direct between
IR0ISS and two other stations IK1SLD and IQ5VR. The contact should be
audible
over portions of Italy and adjacent areas. Interested parties are invited to
listen in on the 145.80 MHz downlink. The contact is expected to be
conducted in
English/Italian.

The school "Salvemini - La Pira" is in Montemurlo, province of Prato,
Tuscany
region and it is a Secondary Middle School; it has 21 classes with
pupils aged
between 11 and 14. The name of the school derives from the fusion of the two
schools of the commune. This is the only secondary middle school of the
area.
The schoolhouse hosts around 520 pupils.

The "Dante Alighieri" School is situated a bit off the town centre of Casale
Monferrato, near the ancient Cittadella, province of Alessandria, Piedmont
region. It's a modern construction, developed on two main buildings: one
for the
school's didactical and administrative activities, one for the sport
activities
(gym and pool). It's surrounded by a wide playground, with a little
plantation
of poplars, planted by the pupils of the school. There are 12 classrooms
(4 at
the main floor and 8 at the first floor) and different labs: Science lab,
Informatics lab, Techno lab, Art lab, Maths lab, Languages lab and a
coloured
and wide library. There is also a lot of afternoon activities, such as Latin
courses, Languages courses and sport tournaments (soccer, basket,
volley). The
Dante Secondary I grade School has a current roll of 230 and a teaching
staff of
29. In the last few years the school has been enhanced by the richness
of its
diverse student population.

[ANS thanks Dave, AA4KN, for the above information]

Danish Astronaut Earns Technician License

Danish Astronaut Andreas Mogensen Andreas Mogensen completed his
license class on Feb 23 and passed his exam on Feb 25. He has been
assined the callsign KG5GCZ.

Andreas was selected as an ESA astronaut in May 2009 and completed the
astronaut basic training programme at the European Astronaut Centre in
Cologne, Germany in November 2010. Since completing the astronaut
basic training programme, Andreas has been trained and certified as a
private pilot by the Lufthansa flight school and is trained and
qualified for spacewalks using both the American EMU suit and the
Russian Orlan suit.

Andreas has been assigned to a 10-day mission to the International
Space Station to be launched September 2015 on the Soyuz TMA-18M
spacecraft. He will be the first astronaut of Danish nationality to go
to space.

[ANS thanks ARISS and ESA for the above information]

NASA JPL 2115 MHz Moonshine Signals Received in Australia

Last week's NASA JPL EME lunar ranging experiment was received in Australia. On Tuesday March 3 between 0600 to 0900 UTC, the JPL tested its Lunar Ranging Experiment. With JPL using 20 kilowatts into a 34-metre antenna, it was suggested that reception of the reflected signal would be possible on a basic receiving antenna.

This inspired Noel Ferguson VK3FI in Mildura, who decided to have a listen. As his three metre dish was out of service, he decided to try an old "grid pack" pay TV antenna to pick up the reflection on 2115 MHz.

The initial noise floor was about strength five. The reflected signal first appeared as the moon rose over the tree line at about 0820 UTC, with the moon's distance at that time about four hundred and three thousand kilometers from earth.

Signals in Mildura peaked at strength seven using the FT847 as an IF on 164 MHz. Noel VK3FI reports that reception continued through to 0900 UTC, when the JPL test was terminated. Well done on getting that signal.

[ANS thanks Vk1wia-news, Australia's WIA News for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS
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